

What is claimed is:

1. A manufactured dry ice product comprising ozone entrapped or physically absorbed on or within the product or both.
- 5 2. The dry ice product of claim 1 being essentially free of water.
3. The dry ice product of claim 2 optionally comprising less than 1 wt. % water.
- 10 4. The dry ice product of claim 1 optionally containing up to 5,000 ppm water.
5. The dry ice product of claim 1 in the form of shaped dry
15 ice units.
6. The dry ice product of claim 5 wherein said dry ice units are compression molded blocks.
- 20 7. The dry ice product of claim 1 in the form of pellets.
8. The dry ice product of claim 1 in the form of powder or flakes.

9. The dry ice product of claim 1 wherein said ozone is present in amounts of at least 0.1 ppm by weight.
- 5 10. The dry ice product of claim 9 wherein said ozone is present in amounts of from 1 to 100 ppm.
11. The dry ice product of claim 10 wherein said ozone is present in amounts of 1 to 10 ppm by weight.
- 10 12. The dry ice of product claim 11 being essentially free of water.
13. The dry ice product of claim 12 wherein said dry ice product optionally contains water in an amount of less than 1 wt. %.
- 15 14. A process for producing an ozonated dry ice product comprising contacting a gaseous ozone stream with liquid carbon dioxide to form a mixture, subsequently cooling the mixture of carbon dioxide and ozone to form dry ice solid containing ozone entrapped or absorbed on or in said dry ice solid.
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15. The process of claim 14 wherein said liquid carbon dioxide is at a pressure of at least 70 psig.
- 5 16. The process of claim 15 wherein said gaseous ozone is at a pressure of at least 90 psig.
17. The process of claim 14 wherein said gaseous ozone stream comprises a mixture of ozone and oxygen.
- 10 18. The process of claim 17 wherein said gaseous ozone stream optionally contains an inert gas.
- 15 19. The process of claim 14 wherein said dry ice solid is in the form of a powder or flake.
20. The process of claim 14 wherein said dry ice solid is compressed into blocks.
- 20 21. The process of claim 14 wherein said dry ice solid is extruded into pellets.

22. The process of claim 14 wherein said liquid carbon dioxide is provided from a supply of liquid carbon dioxide at a pressure of from 200 to 300 psig and wherein said supply of liquid carbon dioxide is expanded to a lower pressure of at least 70 psig.

23. The process of claim 14 wherein said mixture of ozone and liquid carbon dioxide is cooled by expansion in a dry ice press, and said solid dry ice is pressed into blocks.

24. The process of claim 22 wherein said mixture of ozone and liquid carbon dioxide is cooled by expansion in a dry ice press, and said solid dry ice is pressed into blocks.

25. The process of claim 22 wherein said gaseous ozone stream is injected into said liquid carbon dioxide as said supply of liquid carbon dioxide is expanded to said lower pressure.

26. The process of claim 22 wherein said gaseous ozone stream is injected into said liquid carbon dioxide subsequent to said supply of liquid carbon dioxide being expanded to said lower pressure.

27. The process of claim 14 wherein said gaseous ozone stream comprises 10 to 15% by weight ozone.
28. A process of producing an ozonated dry ice product comprising contacting a gas stream containing ozone having a pressure of at least 90 psig with dry ice so as to entrap or absorb said ozone.
29. The process of claim 28 wherein said dry ice is in the form of powder, flakes, or pellets.
30. The process of claim 29 wherein said dry ice is in the form of powder or flakes and subsequent to contact with said gas stream, said powder or flakes are extruded into pellets.
31. A method of chilling a food product comprising placing a food product in the proximity of a dry ice solid containing entrapped or absorbed ozone such that during sublimation of the dry ice, ozone is released therefrom for contact with said food product.
32. The process of claim 31 wherein said placed food product is in storage during transport.

33. The process of claim 31 wherein said placed food product is in stationary storage.
- 5 34. The process of claim 31 wherein said dry ice is in the form of blocks.
35. The process of claim 31 wherein said dry ice is in the form of powder, flakes, or pellets and said dry ice is placed in contact with said food product.
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36. The process of claim 31 wherein said dry ice is essentially free of water.
- 15 37. The process of claim 31 wherein said dry ice optionally contains water up to less than 1 wt. %.
38. The process of claim 31 wherein said dry ice optionally contains water up to 5,000 ppm by weight.
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39. The process of claim 31 wherein said dry ice contains at least 0.1 ppm by weight ozone.

40. The process of claim 31 wherein said dry ice contains 1
to 100 ppm by weight ozone.

41. The process of claim 31 wherein said dry ice contains 1
5 to 10 ppm by weight ozone.

42. The process of claim 41 wherein said dry ice is
essentially free of water.

10 43. The process of claim 41 wherein said dry ice optionally
contains water in amounts less than 1 wt. %.

44. The process of claim 41 wherein said dry ice optionally
contains water in amounts of up to 5,000 ppm by weight.

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